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10/531,081

10/31/2005

Nicolas Berthou

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EXAMINER

MCNALLY, KERRI L

ART UNIT

PAPER NUMBER

2609

MAIL DATE

DELIVERY MODE

07/06/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/531,081

Applicant(s)

BERTHOU ET AL.

Examiner

Kerri L. McNally

Art Unit

2609

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-15 is/are rejected.
- 7) ☒ Claim(s) 6 and 16-19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) ~
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 11/07/2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Art Unit: 2609

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. **Claims 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14 and 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,867,711 (Langner et al.) in view of US Patent No. 6,057,786 (Briffe et al.) and US Patent No. 6,281,810 (Factor).

Regarding claims 1, 4, 5, 7, 8, 11, 12, 13, 14 and 15, Langner discloses a cockpit instrument system wherein a **multifunction display (MFD)** is a customizable **flight data display integrated with controls** to control display formats, communication devices, navigational devices, and equipment sensors (Column 3, lines 35-41). The display may include data for airspeed, altitude, attitude, **horizon**, and heading (Column

Art Unit: 2609

7, lines 19-23 and Column 8, lines 5-13). The controls may include **autopilot controls** (Column 6, lines 5-8). Additionally, **more than one MFD with a display and one or more controls may be used side by side** (Column 4, lines 44-50, Column 13, lines 52-67, Column 14, lines 1-5, and Fig. 3).

Langner does not expressly disclose:

- a main display system for horizon and piloting parameters separate from the automatic pilot control equipment and standby display equipment
- automatic pilot control equipment and standby display equipment each have two operating modes, one of the modes being an integrated standby data display mode and the other being a mode of displaying the automatic pilot set points given by the pilot, wherein each operate in a different mode in normal operating conditions

Briffe discloses an apparatus for aircraft display wherein a **primary flight display** is separate from a heads up display that contains standby instruments intended for back-up to the primary flight display (Abstract, Column 4, lines 7-14, and Fig. 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a backup system to a primary system when problems occur, wherein flight data is displayed and the pilot can control the aircraft.

Factor discloses redundant system for critical flight instruments wherein **two screens are configurable to display separate data** (Abstract) and wherein a toggle or control

Art Unit: 2609

logic in the computer **can be used to reverse the two displays or even to replace two instruments with each other** (Column 5, lines 40-53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to switch between displays or controls in the event of a failure of one of them.

Regarding claim 2, Factor discloses redundant system for critical flight instruments wherein **two screens are configurable to display separate data** (Abstract) and wherein control logic in the computer **can be used to reverse the two displays or even to replace two instruments with each other** (Column 5, lines 40-53). Examiner considers that the controls for the current display or instrument would be the only active controls and if the instruments were reversed, the controlling ability would be transferred to the other screen. It would have been obvious to one of ordinary skill in the art at the time the invention was made to activate only the current controls on the screen and to deactivate them if the control screen is reversed to the other display so that only one person has control at one time.

Regarding claims 3 and 10, Langner further discloses that the MFD's are employed in **connection with** a primary flight display (PFD) or a navigation display (NAV).

Examiner considers that "in connection with" means that the MFD can transmit control set points to the PFD or NAV. Examiner further considers "processing these signals without displaying the set points" is an obvious design choice, and that since MFD's are customizable, that the second MFD can be set to not display the set point adjustments.

Art Unit: 2609

Regarding claim 9, Factor discloses redundant system for critical flight instruments wherein **two screens are configurable to display separate data** (Abstract) and wherein a toggle or control logic in the computer **can be used to reverse the two displays or even to replace two instruments with each other** (Column 5, lines 40-53). Examiner considers that such a toggle would cause an inversion signal to be sent to the other display to notify and switch the systems.

Langner, Briffe, and Factor are analogous art because they are from the same field of endeavor as aircraft instrumentation systems.

Allowable Subject Matter

4. Claims 6, 16, 17, 18, and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: US Patent Application Publication No. 2004/0059472 (Hedrick), US Patent No. 6,842,122 (Langner et al.), US Patent No. 6,832,138 (Straub et al.), US Patent No. 6,946,976 (Langner et al.), US Patent No. 6,803,860 (Langner et al.), US Patent No. 6,784,869 (Clark et al.), US Patent Application Publication No.

Art Unit: 2609

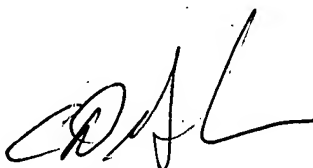
2003/0058136 (Hedrick), US Patent No. 7,030,892 (Gyde et al.), and US Patent No. 6,977,666 (Hedrick).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kerri L. McNally whose telephone number is 571-270-1840. The examiner can normally be reached on Monday - Friday 7:30 AM - 5:00 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Garber can be reached on 571-270-1202. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KLM



CHARLES D. GARBER
SUPERVISORY PATENT EXAMINER